

CLAIMS:

1. A motor comprising:

a yoke, wherein the yoke is substantially cylindrical and has an opening portion, and wherein magnets are secured to the inside of the yoke;

5 a brush holder member secured to the opening portion of the yoke, wherein the brush holder member retains a supply brush;

a housing member secured to the opening portion of the yoke on the outside of the brush holder member, wherein the housing member covers the opening portion; and

10 a securing member formed integrally with the yoke, wherein the securing member secures the brush holder member and the housing member to the yoke.

2. The motor according to claim 1, wherein the securing member comprises a pair of securing pieces, and wherein each securing piece simultaneously secures the housing member and the brush holder member to the yoke by sandwiching the brush holder member between the yoke and the housing member.

3. The motor according to claim 2,
wherein holder securing holes are formed in the brush holder member, wherein each holder securing hole corresponds to one of the securing pieces, and wherein each holder securing hole extends in the axial direction of the yoke, and
5 wherein an engaging portion is formed at a middle portion of each securing piece, and wherein, when each securing piece is inserted into one of the holder securing holes, the corresponding engaging portion locks the brush holder member.
4. The motor according to claim 3,
wherein, when inserted into one of the holder securing holes, each engaging portion locks the brush holder member, and
wherein each engaging portion is formed such that the width of the
5 engaging portion increases toward the proximal end of the corresponding securing piece.
5. The motor according to claim 4, wherein a slit is formed in each securing piece, and wherein each slit extends from the distal end of the securing piece up to at least the corresponding engaging portion.
6. The motor according to claim 2, wherein a foldable securing portion is formed on each securing piece, and wherein, when the foldable securing portion is folded, the housing member is secured to the yoke.

7. The motor according to claim 2, wherein an adjusting projection is formed on the brush holder member, wherein the adjusting projection projects along the axial direction of the yoke, and wherein the adjusting projection adjusts a dimension between the yoke and the housing member by being squeezed when sandwiched between the yoke and the housing member.
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8. The motor according to claim 3, wherein, when press-fitted in one of the holder securing holes, each engaging portion locks the brush holder member, and wherein each engaging portion has an engaging projection, which projects outward toward the distal end of the corresponding securing piece.
9. The motor according to claim 2, wherein the thickness of the securing pieces is the same as the thickness of the yoke.
10. The motor according to claim 9, wherein the yoke is a flat type yoke that is formed substantially cylindrical by a pair of flat portions and a pair of curved portions, wherein the flat portions are parallel to each other, and wherein the curved portions connect the flat portions.
11. The motor according to claim 10, wherein the securing pieces are formed such that each securing piece and the corresponding flat portion of the yoke are located on the same plane before being secured to the brush holder member and the housing member.

12. The motor according to claim 2, wherein a cut-out portion is formed on a rim of the opening portion of the yoke, wherein the securing pieces extend from the periphery of the cut-out portion, and wherein the brush holder member is secured between the cut-out portion and the housing member.

13. A motor comprising:

a yoke, wherein the yoke is substantially cylindrical, and wherein the yoke has an opening portion;

a pair of magnets secured to the inside of the yoke;

5 a brush holder member secured to the opening portion of the yoke, wherein the brush holder member retains a pair of supply brushes;

a housing member secured to the opening portion of the yoke on the outside of the brush holder member, wherein the housing member covers the opening portion; and

10 a pair of securing pieces formed integrally with the yoke, wherein the securing pieces secure the brush holder member and the housing member to the yoke.

14. The motor according to claim 13, wherein each securing piece simultaneously secures the housing member and the brush holder member to the yoke by sandwiching the brush holder member between the yoke and the housing member.

15. The motor according to claim 14,

wherein holder securing holes are formed in the brush holder member, wherein each holder securing hole corresponds to one of the securing pieces, and wherein each holder securing hole extends in the axial direction of the yoke, and

5 wherein an engaging portion is formed at a middle portion of each securing piece, and wherein, when each securing piece is inserted into one of the holder securing holes, the corresponding engaging portion locks the brush holder member.

16. The motor according to claim 15,
wherein, when inserted into one of the holder securing holes, each engaging
portion locks the brush holder member, and
wherein each engaging portion is formed such that the width of the
engaging portion increases toward the proximal end of the corresponding securing
5 piece.
17. The motor according to claim 16, wherein a slit is formed in each securing piece,
and wherein each slit extends from the distal end of the securing piece up to at least
the corresponding engaging portion.
18. The motor according to claim 14, wherein a foldable securing portion is formed on
each securing piece, and wherein, when the foldable securing portion is folded, the
housing member is secured to the yoke.